

ABSTRACT

A system for electroplating a semiconductor wafer is set forth. The system comprises a first electrode in electrical contact with the semiconductor wafer and a second electrode. The first electrode and the semiconductor wafer form a cathode during electroplating of the semiconductor wafer. The second electrode forms an anode during electroplating of the semiconductor wafer. A reaction container defining a reaction chamber is also employed. The reaction chamber comprises an electrically conductive plating solution. At least a portion of each of the first electrode, the second electrode, and the semiconductor wafer contact the plating solution during electroplating of the semiconductor wafer. An auxiliary electrode is disposed exterior to the reaction chamber and positioned for contact with plating solution exiting the reaction chamber during cleaning of the first electrode to thereby provide an electrically conductive path between the auxiliary electrode and the first electrode. A power supply system is connected to supply plating power to the first and second electrodes during electroplating of the semiconductor wafer and is further connected to render the first electrode an anode and the auxiliary electrode a cathode during cleaning of the first electrode.

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